1-1 Tuner (Only MM-L4/L4G)

FM Section

FM IF Adjustment	
SSG FREQ.	98MHZ DEV= 40 KHZ LEVEL=60dB
Adjustment point (TFT2)	FM DETECTOR COIL
DC Digital Meter Output	0.00V
Distortion (0.3%-0.8%) (Figure 1-1)	

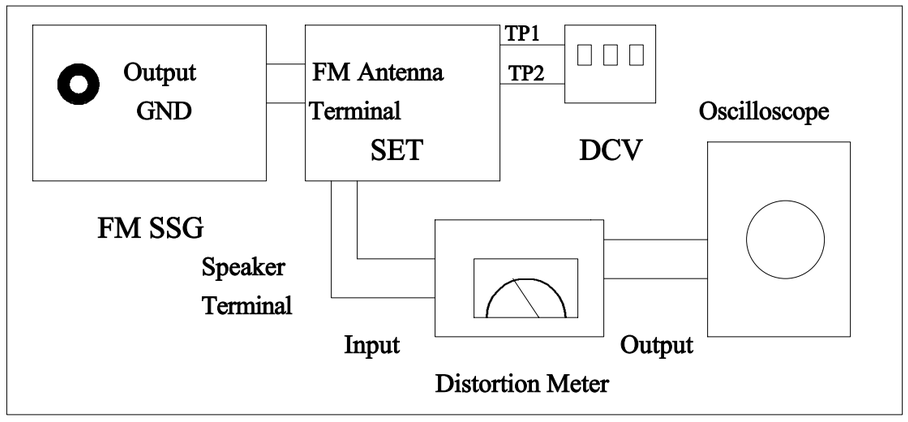

Figure 1-1 IF CENTER and THD Adjustment

FM Frequency Range And S/N 30dB Usable Sens. Check

5 Point :	87.5MHZ	90MHZ	98MHZ	106MHZ	108MHZ
Usable Sens. Spec. S/N 30 dB : Normal : 10dB Limit : 21dB					

FM Stereo Separation Check

fc	fs	Main	Pilot	Level	Spec
98.0MHZ	1KHZ	53%	10%	66dB	Normal : 28dB Limit : 25dB

FM Stereo/Mono Distortion Check

	fc	fs	Dev	Main	Pilot	Level	Spec.
Mono	98MHZ	1KHZ	40 KHZ			66dB	Nor. : 0.5% Lim.: 1.5%
Stereo	98MHZ	1KHZ	75KHZ	53%	10%	66dB	Nor. : 1% Lim. : 5%

FM Seek Stop Check

	fc	fs	Dev	Level	Spec.
Seek Stop	98MHZ	1KHZ	40 KHZ		23-33dB
Adjustment (Figure1-2)	Adjust TVR1(MIC6 30Pin Voltage 1.85V+/ −0.05V), SSG Level 28dB, Seek Stop Check.				

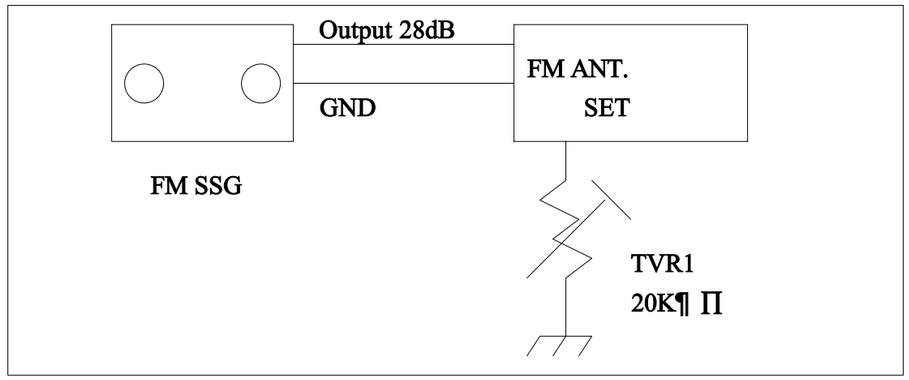

Figure 1-2 FM Auto Search Level Adjustment

AM (MW) Section

AM (MW) IF Adjustment

SSG FREQ.	450KHZ
Frequency	522KHZ
Adjustment Point TFT1	AM IF COIL
Maximum output (Figure 1-3)	

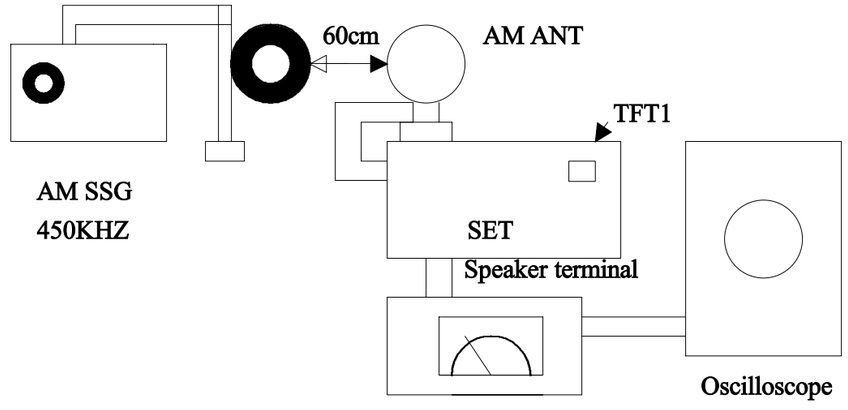

Figure 1-3 AM IF Adjustment

MW Tuning Voltage (VT) Check

Spec.	522KHZ : 1.1V+/-0.1V
	1611KHZ : 7.0V+/-0.5V
Adjustment	Low(522KHZ) VT Basic , Adjust TL11(OSC)

RF Adjustment

1	Low Frequency(594KHZ), Usable Senc. (S/N 20dB) < 60dB
2	Adjust TL10(MW ANT), Gain Output Max.
3	Check Low Frequency(594KHZ), High Frequency(1404KHZ) < 60dB.

Seek Stop Check

fc	fs	Dev	Level	Spec.
999KHZ	400KHZ	30%		40-70dB

LW Section (OPTION)

Tuning Voltage (VT) Check

Spec.	144KHZ : 2V +/- 0.2V
	290KHZ : 7.0V+/-0.5V
Adjustment	Low (144KHZ) VT Basic , Adjust TL6(OSC)

RF Adjustment

1	Low Frequency (170KHZ), Usable Senc. (S/N 20dB) < 68dB
2	Adjust TL9 (LW ANT), Gain Output Max.
3	Check Low Frequency (170KHZ), High Frequency(270KHZ) < 68dB.

Seek Stop Check

fc	fs	Dev	Level	Spec.
212KHZ	400KHZ	30%		40-70dB

SW SECTION (OPTION)

SW1 Tuning Voltage (VT) Chick

Spec.	2.3MHZ:0.8V+/-0.2
	7.3MHZ: 7.0V+/-0.5
Adjustment	Low(2.3MHZ) VT Basic , Adjust TL4 (OSC)

RF Adjustment

1	Low Frequency(3.5MHZ), Usable Senc.(S/N 20dB)<38dB
2	Adjust TL8 (SW ANT), Gain Output Max.
3	Check Low Frequency(3.5MHZ), High Frequency(7.0MHZ) <38dB

Seek Stop Check

Fc	Fs	Dev	Level	Spec.
5MHZ	400KHZ	30%		30+/-15

SW2 Tuning Voltage (VT) Chick

Spec.	9.5MHZ: 1.2V+/-0.1
	26.1MHZ: 8.20V+/-0.5
Adjustment	Low(10MHZ) VT Basic , Adjust TL3 (OSC)

RF Adjustment

1	Low Frequency(10MHZ), Usable Senc.(S/N 20dB)<38dB
2	Adjust TL5 (SW ANT), Gain Output Max.
3	Check Low Frequency(10MHZ), High Frequency(23MHZ) <38dB

Seek Stop Check

Fc	Fs	Dev	Level	Spec.
16MHZ	400KHZ	30%		30+/-15

1-2 Cassette Deck (Only MM-L4/L4G)

Adjust Tape Speed

Item	Tape	Pre-setup	Adjust point	Standard	Figure
Speed control	MTT-111N (3KHZ)	Press play button after putting tape into the Deck	FRONT PCB VWR1	2970KHZ-3030KHZ WOW&FLUTTER 0.2%-0.4%	1-4

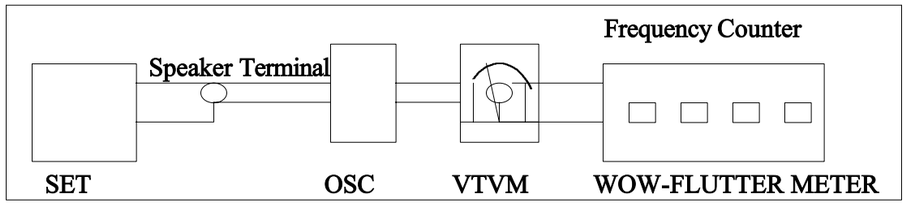

Figure 1-4

Adjust Record Frequency

Item	Tape	Pre-setup	Adjust point	Frequency range	Figure
Record Frequency	MTT-5513	Press Rec. button after connecting	JT1	85KHZ+/-1KHZ	Figure(1-5)

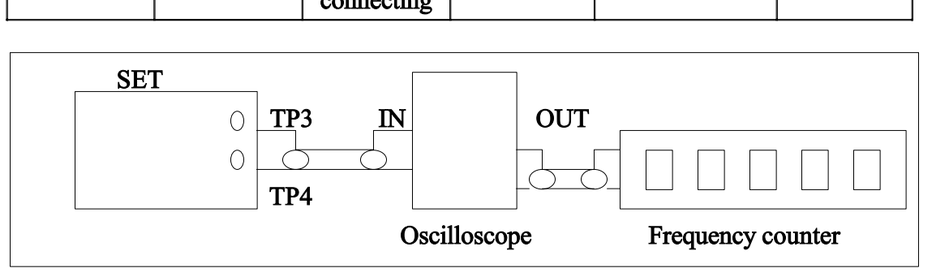

Figure 1-5

Adjust Azimuth

Item	Tape	Pre-Setup	Adjust Point	Standard	Figure
Azimuth	MTT-111CN	Press Play Button after putting tape into the Deck	Adjustment screw of HEAD	8KHZ	Fig. 1-4 Fig 1-6

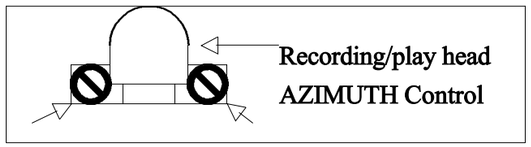

Figure 1-6

1- 3 Tuner (Only MM-L2/L2G)

FM Section

FM IF Adjustment	
SSG FREQ.	10.7MHZ DEV=40.0KHZ LEVEL=60dB
Adjustment point (T101)	FM DETECTOR COIL
Remark	Maximum output (Figure 1-1)
Freq. Setting	Tune to the lowest

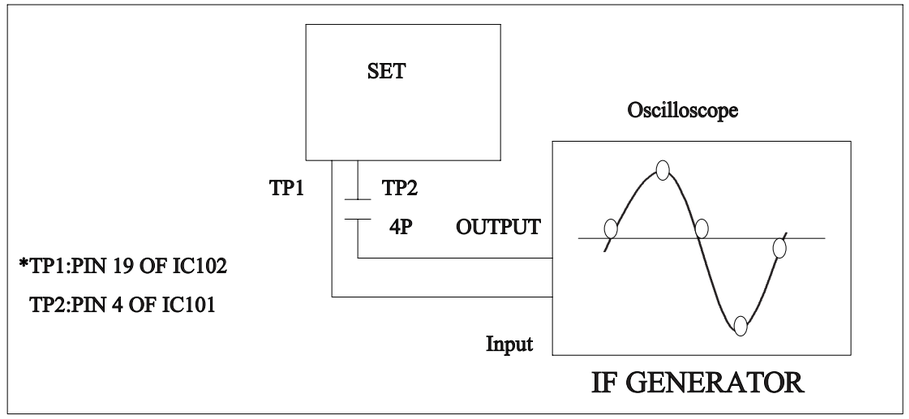

Figure 1-1 IF CENTER Adjustment

FM Frequency Coverage Adjustment

SSG.FREQ.	FREQ.SETTING	ADJUST.POINT	REMARK
87.5MHZ	TUNE TO THE LOWEST	L101	0.9V
108MHZ	TUNE TO THE HIGHEST	CHECK	6V

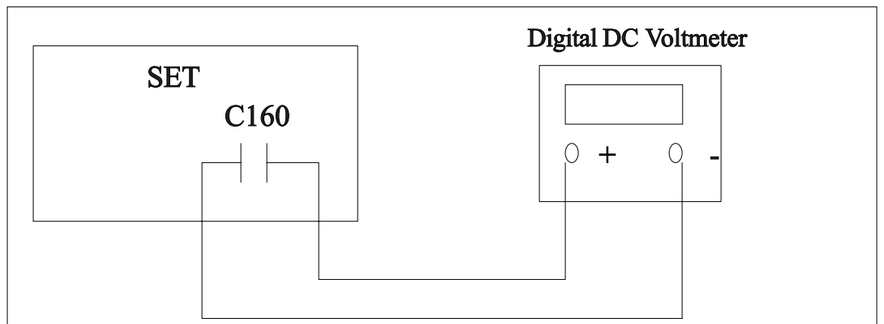

Figure 1-2 FM Freq. Range Adjustment

FM Sensitivity Adjustment

SSG.FREQ.	FREQ.SETTING	ADJUST.POINT	REMARK
90MHZ	90MHZ	L102	MAX. OUTPUT
106MHZ	98MHZ	C161	MAX. OUTPUT

FM Stereo Separation Check

fc	fs	Main	Pilot	Level	Spec
98.0MHZ	1KHZ	53%	10%	66dB	Normal : 25dB Limit : 20dB

FM Seek Stop Check

	fc	fs	Dev	Level	Spec.
Seek Stop	98MHZ	1KHZ	40KHZ		23-30dB

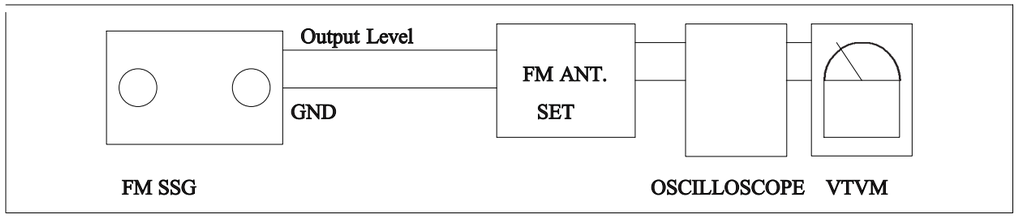

Figure 1-3 FM Stereo Separation AND Seek Stop Check

AM (MW) Section

AM (MW) IF Adjustment

IF GENERATOR	450KHZ
Frequency	999KHZ
Adjustment Point T102	AM IF COIL
Maximum output (Figure 1-4)	

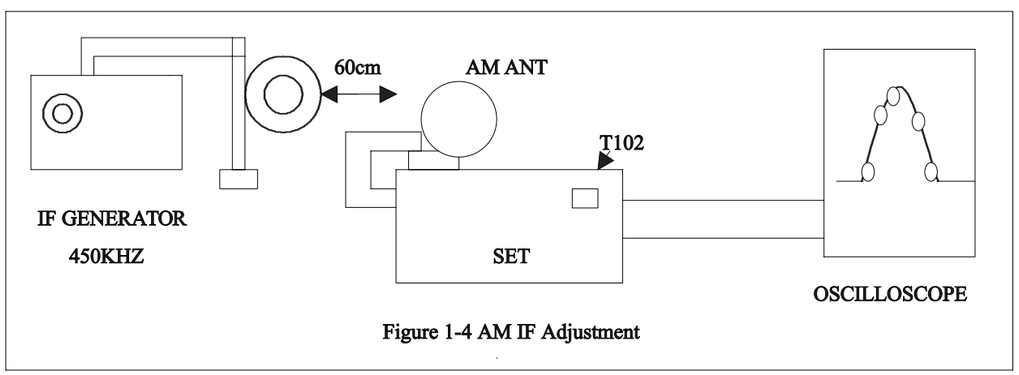

Figure 1-4 AM IF Adjustment

MW Tuning Voltage (VT) Check

Spec.	522KHZ : 0.9V+/-0.1V
	1611KHZ : 7.25V+/-0.5V
Adjustment	Low(522KHZ) VT Basic , Adjust T105(OSC)

RF Adjustment(Figure

1	Low Frequency(594KHZ), High Frequency(1404KHz),Usable Senc. (S/N 20dB) < 60dB
2	Adjust T104(MW ANT), Gain Output Max.
3	Adjust C162 Gain Output Max.

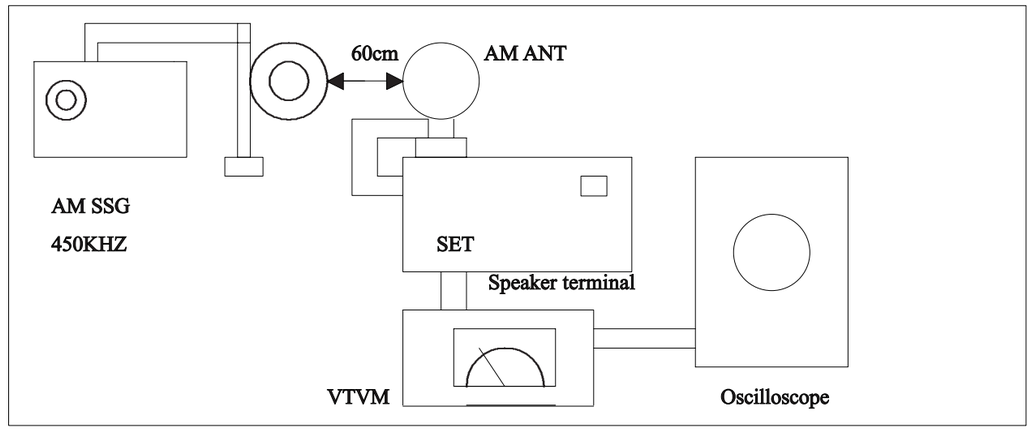

Figure 1-5 MW RF. Adjustment

Seek Stop Check

fc	fs	Dev	Level	Spec.
999KHZ	400 HZ	30%		40-70dB

AM (LW) Section

Tuning Voltage (VT) Check

Spec.	144KHZ : 1.0V +/- 0.2V
	290KHZ : 6.0V+/-0.5V
Adjustment	Low (144KHZ) VT Basic , Adjust T106(OSC)

RF Adjustment

1	Low Frequency (170KHZ), High Frequency(270KHz),Usable Senc. (S/N 20dB) < 68dB
2	Adjust T103 (LW ANT), Gain Output Max.
3	Adjust C183 (LW ANT), Gain Output Max.

Seek Stop Check

fc	fs	Dev	Level	Spec.
212KHZ	400KHZ	30%		40-70dB

1- 4 Cassette Deck (Only MM-L2/L2G)

Tape Speed Check

Item	Tape	Pre-setup	Adjust point	Standard	Figure
Speed control	MTT-111N (3KHZ)	Press play button after putting tape into the Deck		2970KHZ-3030KHZ WOW&FLUTTER 0.2%-0.4%	1-6

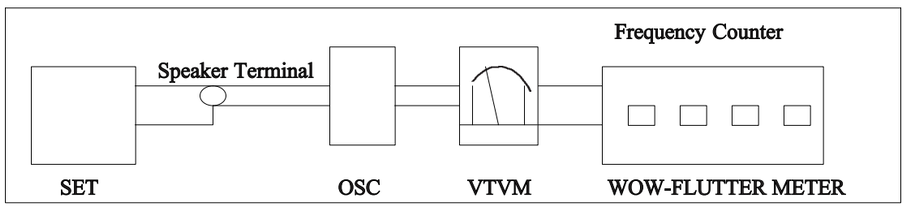

Figure 1-6

Adjust Record Frequency

Item	Tape	Pre-setup	Adjust point	Frequency range	Figure
Record Frequency	MTT-5513	Press Rec. button after connecting	T431	60KHZ+/-1KHZ	Figure(1-7)

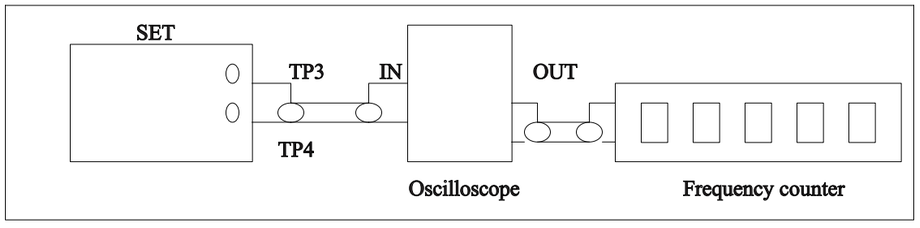

Figure 1-7

Adjust Azimuth

Item	Tape	Pre-Setup	Adjust Point	Standard	Figure
Azimuth	MTT-111CN	Press Play Button after putting tape into the Deck	Adjustment screw of HEAD	8KHZ	Fig. 1-6 Fig 1-8

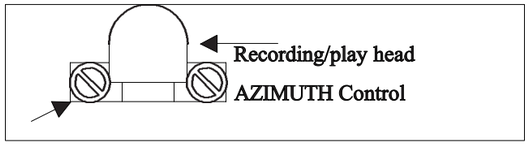

Figure 1-8